

WHAT IS CLAIMED IS:

1. A method for device registration (replication,  
comprising:

5 providing a plurality of call managers in a packet-  
based network, each call manager controlling one or more  
devices coupled to the packet-based network and storing  
composite registration information associated with the  
devices;

10 communicating status information from a first call  
manager to a second call manager in response to a change in  
the control status of a device; and

15 updating the composite registration information stored  
by the second call manager in response to receiving the  
status information.

2. The method of Claim 1, wherein:

20 communicating status information in response to a  
change in the control status of a device comprises  
communicating registration information associated with a  
newly registered device controlled by the first call  
manager; and

25 updating the composite registration information  
comprises adding the registration information associated  
with the newly registered device to the composite  
registration information stored by the second call manager.

3. The method of Claim 1, wherein:

communicating status information in response to a  
change in the control status of a device comprises  
communicating a deletion message indicating the removal of  
5 a device from the control of the first call manager; and  
updating the composite registration information  
comprises deleting the registration information associated  
with the device from the composite registration information  
stored by the second call manager.

10 4. The method of Claim 3, further comprising  
determining that a device has been removed from the control  
of the first call manager in response to a failure by the  
first call manager to receive a response from the device to  
15 a polling message transmitted to the device by the first  
call manager.

20 5. The method of Claim 1, wherein the composite  
registration information comprises:

local registration information associated with devices  
controlled by the second call manager storing the composite  
registration information; and

remote registration information associated with  
devices controlled by other call managers.

6. The method of Claim 1, wherein the composite registration information comprises:

a telephone number associated with at least one device; and

5 a process identification string identifying a device process executing in a call manager controlling the device, the device process coordinating communication with the device.

10 7. The method of Claim 1, wherein the composite registration information is stored in a registration information table.

8. A method for device registration replication,  
comprising:

providing a plurality of call managers in a packet-  
based network, each call manager controlling one or more  
5 devices coupled to the packet-based network and storing  
composite registration information associated with the  
devices;

determining that a first call manager has gone off-  
line; and

10 deleting registration information associated with the  
first call manager from the composite registration  
information stored by a second call manager.

9. The method of Claim 7, wherein determining that  
15 a first call manager has gone off-line comprises:

transmitting a polling message from the second call  
manager over the packet-based network directed to the first  
call manager; and

20 failing to receive a response from the first call  
manager, the first call manager having previously responded  
to a polling message from the second call manager.

~~10.~~ A method for device registration replication, comprising:

providing a plurality of call managers in a packet-based network, each call manager controlling one or more devices coupled to the packet-based network and storing composite registration information associated with the devices;

determining that a first call manager has come on-line; and

communicating local registration information associated with devices controlled by a second call manager from the second call manager to the first call manager.

11. The method of Claim 10, wherein determining that a first call manager has come on-line comprises:

transmitting a polling message from the second call manager over the packet-based network directed to the other call managers coupled to the packet-based network; and

receiving a response from the first call manager indicating that the first call manager is on-line.

12. The method of Claim 10, further comprising:

communicating local registration information associated with devices controlled by a third call manager from the third call manager to the first call manager; and

combining the registration information received from the second and third call managers by the first call manager to form the composite registration information stored by the first call manager.

13. The method of Claim 12, further comprising adding local registration information associated with devices controlled by the first call manager to the composite registration information stored by the first call manager.

14. A system for device registration replication in a packet-based network, comprising:

5 a first call manager and a second call manager coupled to the packet-based network, the first and second call managers each controlling one or more devices and storing composite registration information associated with the devices;

the first call manager operable to:

10 determine that the second call manager has come on-line and communicate local registration information associated with the devices controlled by the first call manager to the second call manager;

15 communicate registration information associated with a newly registered device controlled by the first call manager to the second call manager;

communicate a deletion message to the second call manager indicating the removal of a device from the control of the first call manager; and

20 determine that the second call manager has gone off-line and delete registration information associated with devices controlled by the second call manager from the composite registration information stored by the first call manager.

15. A system for device registration replication in a packet-based network, comprising:

5 a first call manager and a second call manager coupled to the packet-based network, the first and second call managers each controlling one or more devices and storing composite registration information associated with the devices;

10 the first call manager operable to communicate status information to the second call manager in response to a change in the control status of a device controlled by the first call manager; and

15 the second call manager operable to update the composite registration information stored by the second call manager in response to receiving status information from the first call manager.

16. The system of Claim 15, wherein:

20 the first call manager is operable to communicate status information in response to a change in the control status of a device by communicating registration information associated with a newly registered device controlled by the first call manager; and

25 the second call manager is operable to update the composite registration information stored the second call manager by adding the registration information associated with the newly registered device to the composite registration information stored by the second call manager.



17. The system of Claim 15, wherein:

the first call manager is operable to communicate status information in response to a change in the control status of a device by communicating a deletion message  
5 indicating the removal of a device from the control of the first call manager; and

the second call manager is operable to update the composite registration information stored by the second call manager by deleting the registration information  
10 associated with the device from the composite registration information stored by the second call manager.

18. The method of Claim 17, wherein the first call manager is further operable to determine that a device has been removed from the control of the first call manager in  
15 response to a failure by the first call manager to receive a response from the device to a polling message transmitted to the device by the first call manager.

20 19. The system of Claim 15, wherein the composite registration information stored in the second call manager comprises:

local registration information associated with devices controlled by the second call manager; and

25 remote registration information associated with devices controlled by the first call manager.

20. The system of Claim 15, wherein the composite registration information stored in the first and second call managers comprises:

5 a telephone number associated with at least one device; and

a process identification string identifying a device process executing in the call manager controlling the device, the device process coordinating communication with the device.

10 21. The system of Claim 20, wherein each telephone number is associated with a process identification string in a registration information table.

15 22. The system of Claim 15, wherein the first call manager is further operable to:

determine that the second call manager has gone off-line; and

20 delete registration information associated with devices controlled by the second call manager from the composite registration information stored by the first call manager.

25 23. The system of Claim 22, wherein the first call manager determines that the second call manager has gone off-line when the first call manager fails to receive a response to a polling message sent to the second call manager, the second call manager having previously responded to a polling message from the first call manager.

24. The system of Claim 15, wherein the first call manager is further operable to:

determine that the second call manager has come on-line; and

5       communicate local registration information associated with devices controlled by the first call manager to the second call manager.

10       25. The system of Claim 24, wherein the first call manager determines that the second call manager has come on-line when the first call manager receives a response to a polling message from the second call manager indicating that the second call manager is on-line.

15       26. The system of Claim 25, further comprising a third call manager operable to:

determine that the second call manager has come on-line; and

20       communicate local registration information associated with devices controlled by the third call manager to the second call manager.

25       27. The system of Claim 26, wherein the second call manager is further operable to combine the registration information received from the first and third call managers to form the composite registration information stored by the second call manager.

28. The system of Claim 27, wherein the second call manager is further operable to add local registration information associated with devices controlled by the second call manager to the composite registration information stored by the second call manager.

~~29~~. A first call manager coupled to a packet-based network, the first call manager comprising:

one or more device processes controlling one or more devices coupled to the packet-based network; and

5 a digit analysis module storing composite registration information associated with the devices;

10 the first call manager operable to communicate status information from the digit analysis module to a second call manager in response to a change in the control status of a device controlled by the first call manager.

15 30. The first call manager of Claim 29, wherein the digit analysis module is operable to communicate status information in response to a change in the control status of a device by communicating registration information associated with a newly registered device controlled by the first call manager.

20 31. The first call manager of Claim 29, wherein the digit analysis module is operable to communicate status information in response to a change in the control status of a device by communicating a deletion message indicating the removal of a device from the control of the first call manager.

25 32. The first call manager of Claim 31, further operable to determine that a device has been removed from the control of the first call manager in response to a failure by the first call manager to receive a response  
30 from the device to a polling message.

33. The first call manager of Claim 29, wherein the digit analysis module is operable to communicate status information directly to a digit analysis module of the second call manager.

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34. The first call manager of Claim 29, further operable to:

determine that a second call manager has gone off-line; and

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delete registration information associated with devices controlled by the second call manager from the composite registration information stored in the digit analysis module of the first call manager.

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35. The first call manager of Claim 34, wherein the first call manager determines that the second call manager has gone off-line when the first call manager fails to receive a response to a polling message sent to the second call manager, the second call manager having previously responded to a polling message from the first call manager.

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36. The first call manager of Claim 29, further operable to:

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determine that a second call manager has come on-line; and

communicate local registration information associated with devices controlled by the first call manager to the second call manager.

37. The first call manager of Claim 36, wherein the first call manager determines that the second call manager has come on-line when the first call manager receives a communication from the second call manager indicating that the second call manager is on-line.

~~38.~~ First call manager software embodied in a computer-readable medium and operable to perform the following steps:

5 control one or more devices coupled to a packet-based network;

store registration information associated with the devices controlled by the first call manager software; and

10 communicate status information to second call manager software in response to a change in the control status of a device controlled by the first call manager software.

15 39. The first call manager software of Claim 38, further operable to communicate status information in response to a change in the control status of a device by communicating registration information associated with a newly registered device controlled by the first call manager software.

20 40. The first call manager software of Claim 38, further operable to communicate status information in response to a change in the control status of a device by communicating a deletion message indicating the removal of a device from the control of the first call manager software.

25 41. The call manager software of Claim 40, further operable to determine that a device has been removed from the control of the first call manager software in response to a failure to receive a response from the device to a  
30 polling message.



42. The first call manager software of Claim 38, further operable to:

store registration information associated with devices controlled by the second call manager software;

5 determine that the second call manager software has gone off-line; and

delete registration information associated with the devices controlled by the second call manager software.

10 43. The first call manager software of Claim 42, further operable to determine that the second call manager has gone off-line in response to the first call manager software failing to receive a response to a polling message sent to the second call manager software.

15 44. The first call manager software of Claim 38, further operable to:

determine that the second call manager software has come on-line; and

20 communicate local registration information associated with devices controlled by the first call manager software to the second call manager software.

25 45. The first call manager software of Claim 44, further operable to determine that the second call manager has come on-line when the first call manager software receives a communication from the second call manager software indicating that the second call manager software is on-line.

46. A first call manager coupled to a packet-based network, the first call manager comprising:

means for controlling one or more devices coupled to the packet-based network; and

5 means for storing composite registration information associated with the devices;

means for communicating status information to a second call manager in response to a change in the control status of a device controlled by the first call manager.

10 47. The first call manager of Claim 46, further comprising means for communicating registration information associated with a newly registered device controlled by the first call manager.

15 48. The first call manager of Claim 46, further comprising means for communicating a deletion message indicating the removal of a device from the control of the first call manager.

20 49. The first call manager of Claim 48, further comprising means for determining that a device has been removed from the control of the first call manager in response to a failure by the first call manager to receive  
25 a response from the device to a polling message.

50. The first call manager of Claim 46, further comprising:

means for determining that a second call manager has gone off-line; and

5 means for deleting registration information associated with devices controlled by the second call manager from the composite registration information stored by the first call manager.

10 51. The first call manager of Claim 50, further comprising means for determining that the second call manager has gone off-line when the first call manager fails to receive a response to a polling message sent to the second call manager, the second call manager having  
15 previously responded to a polling message from the first call manager.

52. The first call manager of Claim 46, further comprising:

20 means for determining that a second call manager has come on-line; and

means for communicating local registration information associated with devices controlled by the first call manager to the second call manager.

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53. The first call manager of Claim 52, further comprising means for determining that the second call manager has come on-line when the first call manager receives a communication from the second call manager  
30 indicating that the second call manager is on-line.